Asset Allocation

South Dakota Trust Funds

Dakota Cement Trust

Education Enhancement Trust

Health Care Trust

School & Public Lands

South Dakota Investment Council
June 2, 2022

Dakota Cement Trust Fund Established

- Proceeds from the sale of the South Dakota Cement Plant in Rapid City in March of 2001
- Constitutional Amendment enacted April 2001 allows "stocks, bonds, mutual funds and other financial instruments as provided by law"
- Constitutional Amendment enacted November 2012 changed distribution calculation from \$12 million to 4% of average fair value
- Accompanying statute (SDCL 4-5-47) applies the prudent man standard
- Beginning principal value as of April 18, 2001 was \$238 million, current principal is the same

Education Enhancement Trust Fund Established

- Proceeds from South Dakota's share of the 1998 national tobacco lawsuit settlement and state youth-at-risk funds
- Constitutional Amendment enacted April 2001 allows "stocks, bonds, mutual funds and other financial instruments as provided by law"
- Accompanying statute (SDCL 10-50B-11.1) applies the prudent man standard effective July of 2001
- Separate investment fund established on July 1, 2002 (after distribution law effective) with \$81.8 million; current principal of \$431.7 million includes securitization of tobacco settlement payments refinancing in March of 2013 & tobacco arbitration settlement (the principal will continue to grow)
- Contains \$7.625 million principal for the South Dakota postsecondary scholarship grant fund

Heath Care Trust Fund Established

- Proceeds from federal money for Medicare and Medicaid repayments to nursing home patients
- Constitutional Amendment enacted April 2001 allows "stocks, bonds, mutual funds and other financial instruments as provided by law"
- Accompanying statute (SDCL 28-6-33) applies the prudent man standard in July of 2001
- Separate investment fund established on July 1, 2002 (after distribution law established) with \$62.5 million; current principal of \$135.6 million includes \$50 million from 2021 legislation and additional federal and tobacco tax payments (no future principal increases expected)

School & Public Land Fund Established

- Proceeds from school land provided at statehood and other designated amounts
- Limited to government fixed income investments, including SBA & other non-marketable securities, until November 2000
- Constitutional Amendment enacted November 2000 allows "stocks, bonds, mutual funds and other financial instruments as provided by law"
- Accompanying statue (SDCL 5-10-18) applies the prudent man standard
- Governor may disapprove any investment per Constitution. Notified prior to committing to illiquid investments

Annual Distribution

Dakota Cement Trust Fund:

- Article XIII Sec. 21 of the Constitution requires annual distribution of 4% of the lesser of the 16-quarter average market value or the calendar year end market value
- Not limited by principal balance

Education Enhancement and Health Care Trust Funds:

- By codified law, annual distribution is 4% of the 4-year average fair value of the fund, as of December 31, distributed on July 1 of the following year as appropriated by the Legislature
- By Constitution, 4% distribution conditioned upon the Dec. 31 fair value of the fund being above the principal of the fund

School and Public Lands Fund:

- Art. VIII Sec. 3 of the Constitution requires all interest and income to be faithfully used and applied each year for the benefit of the public schools of the state after the principal is increased by an amount equal to the rate of inflation from realized gains or investment income. Land rent and mineral income is distributed without regard to inflation adjustment
- SDCL 5-10-18.3(4) allows the inflation offset to be satisfied by realized net capital gains if available, otherwise income

DCT HCT SPL Capital Market Benchmark

allocations, indexes, min max ranges, and equity-like risk

	Public <u>Equity</u>	Real Estate <u>REIT/Core</u>	HY Corp <u>Debt</u>	Investment Grade <u>Debt</u>	<u>Cash</u>		Private <u>Equity</u>		pportunis Real <u>Estate</u>		HY eal Esta <u>Debt</u>	te	TIPS	<u>Co</u>	ommodi	<u>ty</u>	Equity <u>Like Risk</u>
Maximum	75%	20% 2	15%	50%	50%		11%		14%	2	10%		10%		5%		77%
2023 Benchmark	50%	11%	7%	30%	2%	3	0%	4	0%	4	0%	4	0%	4	0%	4	63%
Minimum	18% 1	2%	0%	13% 1	0%		0%		0%		0%		0%		0%		36%
Index	MSCI AC IMI exREITs(3/4 + MSCI IMI US exREITs(1/	,	FTSE High Yield	FTSE US BIG	FTSE 3 mo.Tsy bill												
Benchmark Histo																	
2022 Benchmark	51%	10%	7%	30%	2%	3	0%	4	0%	4	0%	4	0%	4	0%	4	63%
2021 Benchmark	51%	10%	7%	30%	2%	3	0%	4	0%	4	0%	4	0%	4	0%	4	63%
2020 Benchmark	51%	10%	7%	30%	2%	3	0%	4	0%	4	0%	4	0%	4	0%	4	63%
2019 Benchmark	51%	10%	7%	30%	2%	3	0%	4	0%	4	0%	4	0%	4	0%	4	63%
2018 Benchmark	51%	10%	7%	30%	2%	3	0%	4	0%	4	0%	4	0%	4	0%	4	63%
2017 Benchmark	51%	10%	7%	30%	2%	3	0%	4	0%	4	0%	4	0%	4	0%	4	63%
2016 Benchmark	51%	10%	7%	30%	2%		0%						0%		0%		63%
2015 Benchmark	53%	10%	7%	26%	2%		0%						2%		0%		63%
2014 Benchmark	52%	6%	5%	28%	2%		2%						5%		0%		

^{1.} Buffer for market drift of 1% for equity and 1/2% for debt (example: Investment Grade debt minimum of 13% can drift to 12.5%)

^{2.} Real Estate (RE) maximum applies to REITS/Core RE and Opportunistic RE combined with Opportunistic RE count 1.3x against RE max. Base case allocation used for partnerships

^{3.} Cash to provide liquidity for distributions and rebalancing

^{4.} Skill and niche categories are not included in benchmark but do have a permitted range to invest in opportunistically

DCT HCT SPL expected return and standard deviation

using SDIC expected returns and fat-tail adjusted risk measures

(SDIC expected returns with fat tail std. de	ev. and correla	ations)				Correlation	Matrix				
E	xpected St	andard					HY		Private	RE	
	Return De	eviation eviation	US Eq	Intl Eq	<u>Debt</u>	<u>Cash</u>	<u>Debt</u>	<u>REITs</u>	Equity	Opport	<u>TIPS</u>
Domestic (US) Equity	7.2%	22%	100%								
International Equity	7.2%	22%	100%	100%							
Investment Grade debt	4.3%	7%	0%	0%	100%						
Cash	3.9%	1%	0%	0%	0%	100%					
High Yield debt	5.7%	12%	75%	75%	23%	0%	100%				
REITs	5.8%	24%	75%	75%	0%	0%	50%	100%			
Private Equity	7.8%	30%	88%	88%	0%	0%	55%	70%	100%		
RE Opportunistic	6.8%	32%	75%	75%	2%	0%	60%	90%	60%	100%	
Tsy Inflation Protected Sec (TIPS)	4.3%	7%	0%	0%	100%	0%	24%	0%	0%	0%	100%

^{*} Standard deviation is a measure of volatility. There is a 66% chance of being within plus or minus 1 standard deviation, a 95% chance of being within 2 standard deviations.

										Mean	1 year	20 year
	US	Intl			High		Private	RE		Expected	l Standard	Standard
	Equity	Equity	<u>Debt</u>	<u>Cash</u>	<u>Yield</u>	REITs	Equity	Opport	<u>Tips</u>	Return	Deviation	Deviation
70:30 Equity/Debt	70%	0%	30%	0%	0%	0%	0%	0%	0%	6.30%	15.5%	3.5%
2003-2005 allocation	20%	0%	55%	0%	10%	15%	0%	0%	0%	5.23%	9.3%	2.1%
2006 allocation	27%	13%	40%	0%	10%	10%	0%	0%	0%	5.73%	12.0%	2.7%
2007-2011 allocation	32%	16%	33%	2%	5%	5%	2%	0%	5%	5.88%	12.8%	2.9%
2012-2014 allocation	35%	17%	28%	2%	5%	6%	2%	0%	5%	6.01%	13.8%	3.1%
2015 allocation	37%	16%	26%	2%	7%	10%	0%	0%	2%	6.05%	14.3%	3.2%
2016-2022 allocation	34%	17%	30%	2%	7%	10%	0%	0%	0%	6.00%	13.9%	3.1%
Benchmark FY23 (proposed)	33%	17%	30%	2%	7%	11%	0%	0%	0%	5.98%	13.9%	3.1%

Return Ranges	Mean	1 Year Horizon	20 Year Horizon
	Exp Ret	<u>up 1 sd</u> <u>dn 1 sd</u> <u>dn 2 sd</u>	<u>up 1sd</u> <u>dn 1 sd</u> <u>dn 2 sd</u>
Benchmark FY23 (proposed)	5.98%	19.9% -7.9% -21.8%	9.1% 2.9% -0.2%

EET Capital Market Benchmark

allocations, indexes, min max ranges, and equity-like risk

	Public <u>Equity</u>	Real Estate <u>REIT/Core</u>	HY Corp <u>Debt</u>	Investmer Grade <u>Debt</u>	1t 5	Tax- exempt <u>Debt</u>	5	<u>Cash</u>		Private Equity	O	oportunis Real <u>Estate</u>		HY eal Esta <u>Debt</u>	ite	TIPS	<u>C</u>	ommodi	ty	Equity <u>Like Risk</u>
Maximum	75%	20% 1	15%	50%				50%		10%		13%	1	10%		10%		5%		77%
2023 Benchmark (proposed)	50%	11%	7%	24%		6%		2%	3	0%	4	0%	4	0%	4	0%	4	0%	4	63%
Minimum	18%	2%	0%	13%	2			0%		0%		0%		0%		0%		0%		36%
Index	MSCI AC IMI exREITs(3/4) + MSCI IMI US exREITs(1/4)	MSCI REIT	FTSE High Yield	FTSE US BIG	(Pi	Bloomberg Muni 7 yr. IMCO manag		FTSE 3 mo. Tsy b	ill											
Benchmark Histo		400/	70/	0.40/		C 0/		20/	2	00/	4	00/	4	00/	4	00/	4	00/	4	C20/
2022 Benchmark	51%	10%	7%	24%		6%		2%	3	0%	4	0%	4	0%	4	0%	4	0%	4	63%
2021 Benchmark	51%	10%	7%	22%		8%		2%	3	0%	4	0%	4	0%	4	0%	4	0%	4	63%
2020 Benchmark	51%	10%	7%	22%		8%		2%	3	0%	4	0%	4	0%	4	0%	4	0%	4	63%
2019 Benchmark	51%	10%	7%	22%		8%		2%	3	0%	4	0%	4	0%	4	0%	4	0%	4	63%
2018 Benchmark	51%	10%	7%	20%		10%		2%	3	0%	4	0%	4	0%	4	0%	4	0%	4	63%
2017 Benchmark	51%	10%	7%	20%		10%		2%	3	0%	4	0%	4	0%	4	0%	4	0%	4	63%
2016 Benchmark	51%	10%	7%	20%		10%		2%		0%						0%		0%		63%
2015 Benchmark	53%	10%	7%	16%		10%		2%		0%						2%		0%		63%
2014 Benchmark	52%	6%	5%	17%		11%		2%		2%						5%		0%		

^{1.} Real Estate maximum applies to REITS/Core RE and Opportunistic combined. Opportunistic RE counts 1.3x against RE max. Base case allocation used for partnerships

^{2.} Buffer for market drift of 1/2% (example: Inv. Grade Fixed Income minimum of 13% can drift to 12.5%)

^{3.} Cash to provide liquidity for distributions and rebalancing

^{4.} Skill and niche categories are not included in benchmark but do have a permitted range to invest in opportunistically

^{5.} Tax-exempt will combine with Investment Grade Fixed Income for purpose of minimums/maximums

EET expected return and standard deviation

using SDIC expected returns and fat-tail adjusted risk measures

(SDIC expected returns with fat tail std. dev. and correlations)

Correlation Matrix

	Expected	Standard					Tax -Exe	HY		Private	RE	
	Return	<u>Deviation</u>	US Eq	Intl Eq	<u>Debt</u>	<u>Cash</u>	<u>Debt</u>	<u>Debt</u>	<u>REITs</u>	Equity	Opport	TIPS
Domestic (US) Equity	7.2%	22%	100%									
International Equity	7.2%	22%	100%	100%								
Investment Grade debt	4.3%	7%	0%	0%	100%							
Cash	3.9%	1%	0%	0%	0%	100%						
Tax exempt debt	3.8%	8%	0%	0%	100%	0%	100%					
High Yield debt	5.7%	12%	75%	75%	23%	0%	23%	100%				
REITs	5.8%	24%	75%	75%	0%	0%	0%	50%	100%			
Private Equity	7.8%	30%	88%	88%	0%	0%	0%	55%	70%	100%		
RE Opportunistic	6.8%	32%	75%	75%	2%	0%	2%	60%	90%	60%	100%	
Tsy Inflaton Protected Sec (TIPS	4.3%	7%	0%	0%	100%	0%	100%	24%	0%	0%	0%	100%

^{*} Standard deviation is a measure of volatility. There is a 66% chance of being within plus or minus 1 standard deviation, a 95% chance of being within 2 standard deviations.

	US	Intl			Tax	High		Private	RE		Mean	1 year I Standard	20 year I Standard
	<u>Equity</u>	<u>Equity</u>	Bonds	Cash	Exempt	<u>Yield</u>	<u>REITs</u>	Equity	Opport	<u>Tips</u>	Return		Deviation
70:30 Equity/Debt	70%	0%	30%	0%	0%	0%	0%	0%	0%	0%	6.30%	15.5%	3.5%
2003-2005 allocation	25%	0%	10%	0%	35%	10%	10%	0%	0%	10%	5.13%	9.5%	2.1%
2006 allocation	27%	13%	3%	0%	32%	10%	10%	0%	0%	5%	5.57%	12.1%	2.7%
2007-2011 allocation	32%	16%	0%	2%	35%	5%	5%	2%	0%	3%	5.70%	12.9%	2.9%
2012-2013 allocation	35%	17%	0%	2%	30%	5%	6%	2%	0%	3%	5.86%	13.8%	3.1%
2014 allocation	35%	17%	17%	2%	11%	5%	6%	2%	0%	5%	5.95%	13.8%	3.1%
2015 allocation	37%	16%	16%	2%	10%	7%	10%	0%	0%	2%	6.00%	14.4%	3.2%
2016-2018 allocation	34%	17%	20%	2%	10%	7%	10%	0%	0%	0%	5.95%	14.0%	3.1%
2019-2022 allocation	34%	17%	22%	2%	8%	7%	10%	0%	0%	0%	5.96%	13.9%	3.1%
Benchmark FY23 (proposed)	33%	17%	24%	2%	6%	7%	11%	0%	0%	0%	5.95%	13.9%	3.1%

Return Ranges	Mean	1 `	Year Horiz	on	20	Year Horiz	ึ่งท
	Exp Ret	up 1 sd	<u>dn 1 sd</u>	dn 2 sd	up 1sd	<u>dn 1 sd</u>	dn 2 sd
Benchmark FY23 (proposed)	5.95%	19.9%	-8.0%	-21.9%	9.1%	2.8%	-0.3%